

**NOVEL POLYAMINE ANALOGUES AS THERAPEUTIC AND
DIAGNOSTIC AGENTS**

RELATED APPLICATIONS

of U.S.S.N. 09/341,400, filed 10/14/99, now U.S. Pat. No. 6,172,261,
This is a continuation-in-part of PCT/US98/14896 filed July 15, 1998, which
claims benefit of priority from U.S. Provisional Applications 60/052,586, filed July 15,
1997; 60/065,728, filed November 14, 1997; and 60/085,538, filed May 15, 1998; all of
which are hereby incorporated by reference as if fully set forth.

FIELD OF THE INVENTION

The invention in the field of chemistry and biochemistry relates to the
synthesis and use of novel polyamine transport (PAT) inhibitor compounds with
pharmacological or agricultural uses and as probes for biochemical assays or for
purification of selected polyamine binding targets. As drugs, these compounds are
used to treat disorders of undesired cell proliferation, primarily cancer, alone or
combined with other agents such as polyamine synthesis inhibitors.

The invention also relates to the synthesis and use of such novel polyamines
as part of combinatorial libraries. These libraries are used to discover compositions
that inhibit PAT and/or that bind to a cellular polyamine transporter (PATr). Various
members of these libraries or compounds discovered through use of the libraries have
utility as drugs, agricultural chemicals, and as probes.

BACKGROUND OF THE INVENTION

Decades of research on the myriad of biological activities that the polyamines,
putrescine, spermidine and spermine play in cellular processes have shown the
profound role they play in life (Cohen, S.S., "A Guide to the Polyamines" 1998,
Oxford University Press, New York). As polycations at physiological pH, they bind
tightly to and strongly modulate the biological activities of all of the anionic cellular
components. Specific and strong interactions have been associated with DNA and